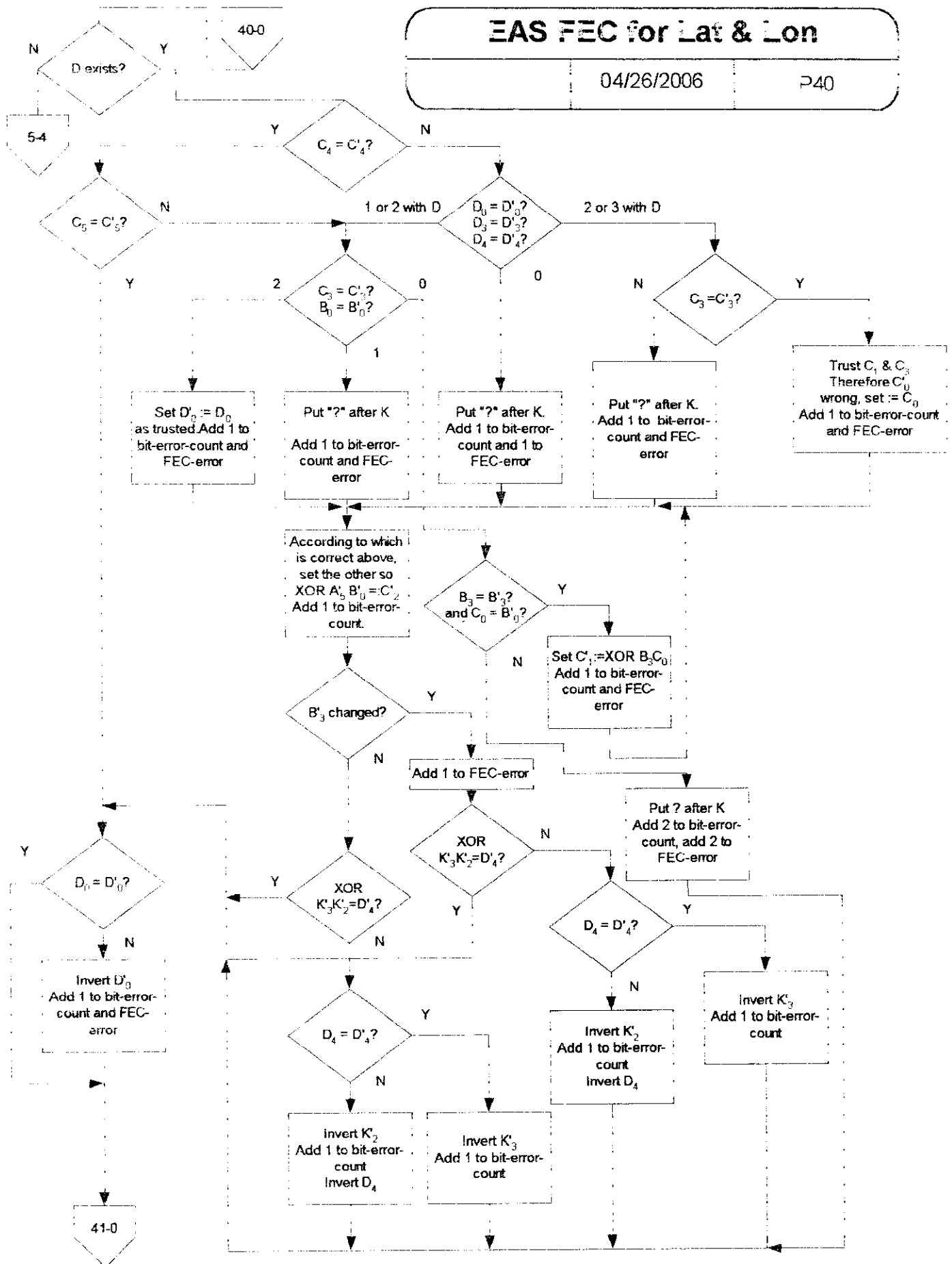


<b>EAS FEC for Lat &amp; Lon</b>		
	04/26/2006	P40

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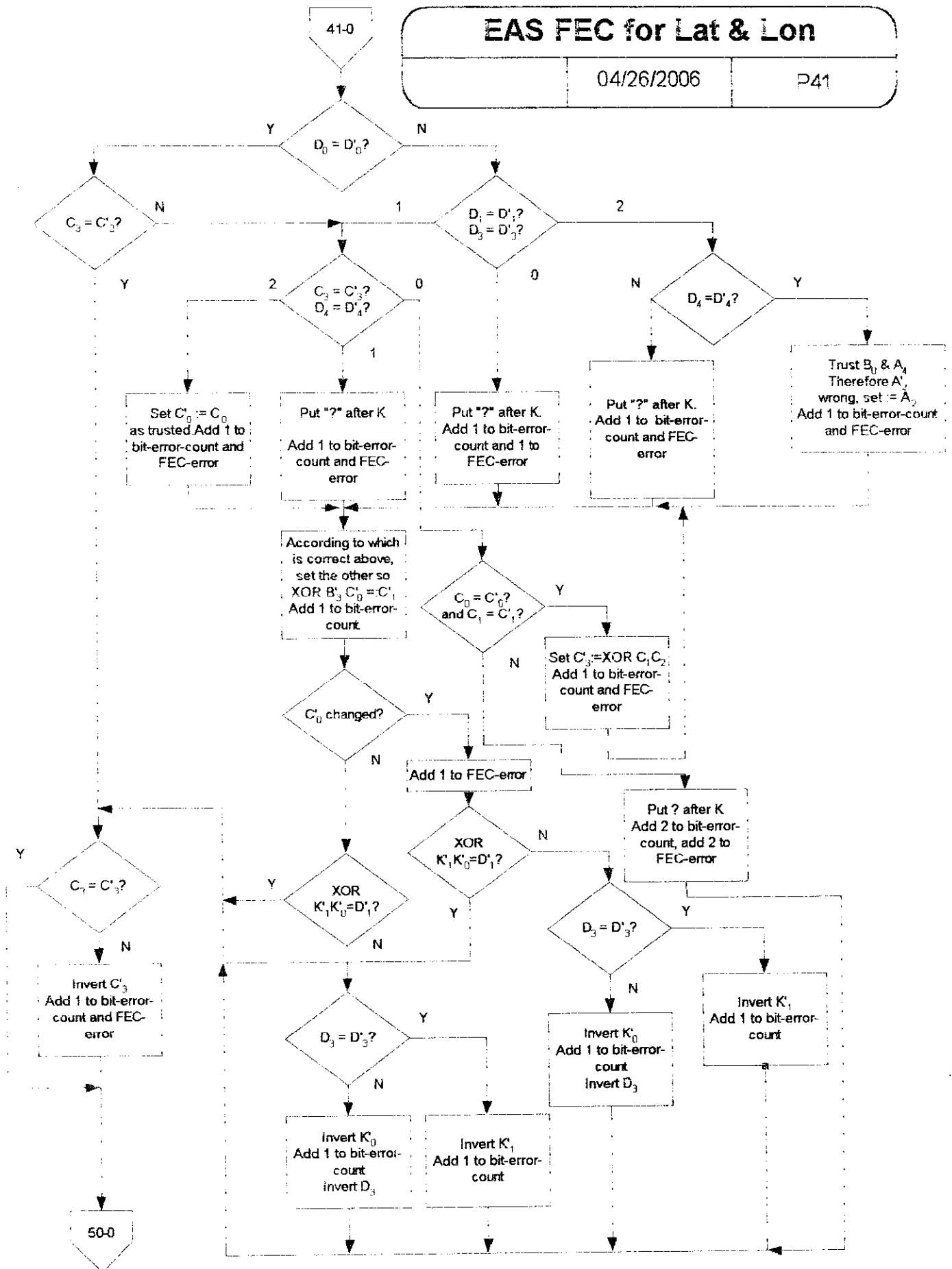
P40



# EAS FEC for Lat & Lon

04/26/2006

P41

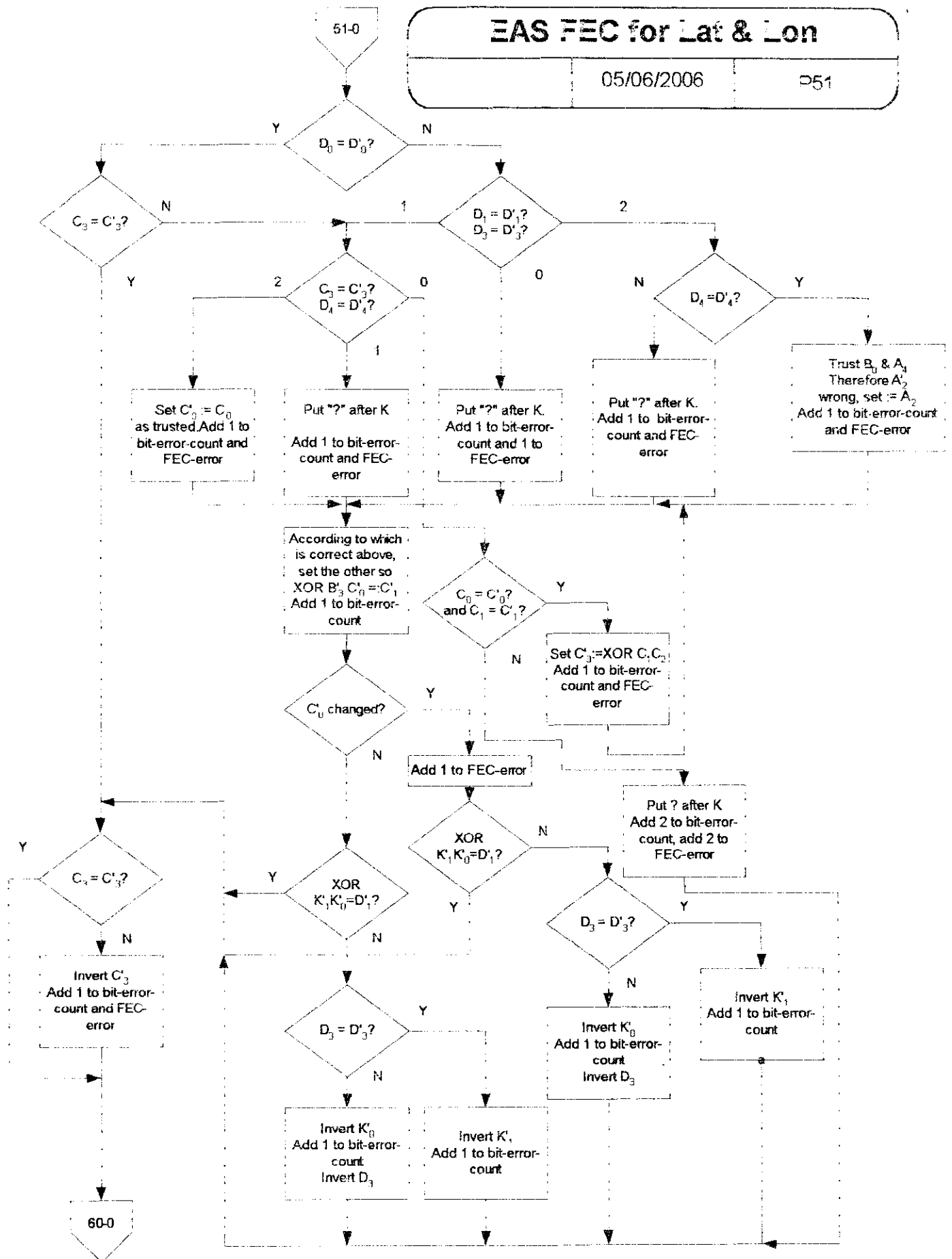




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05/06/2006

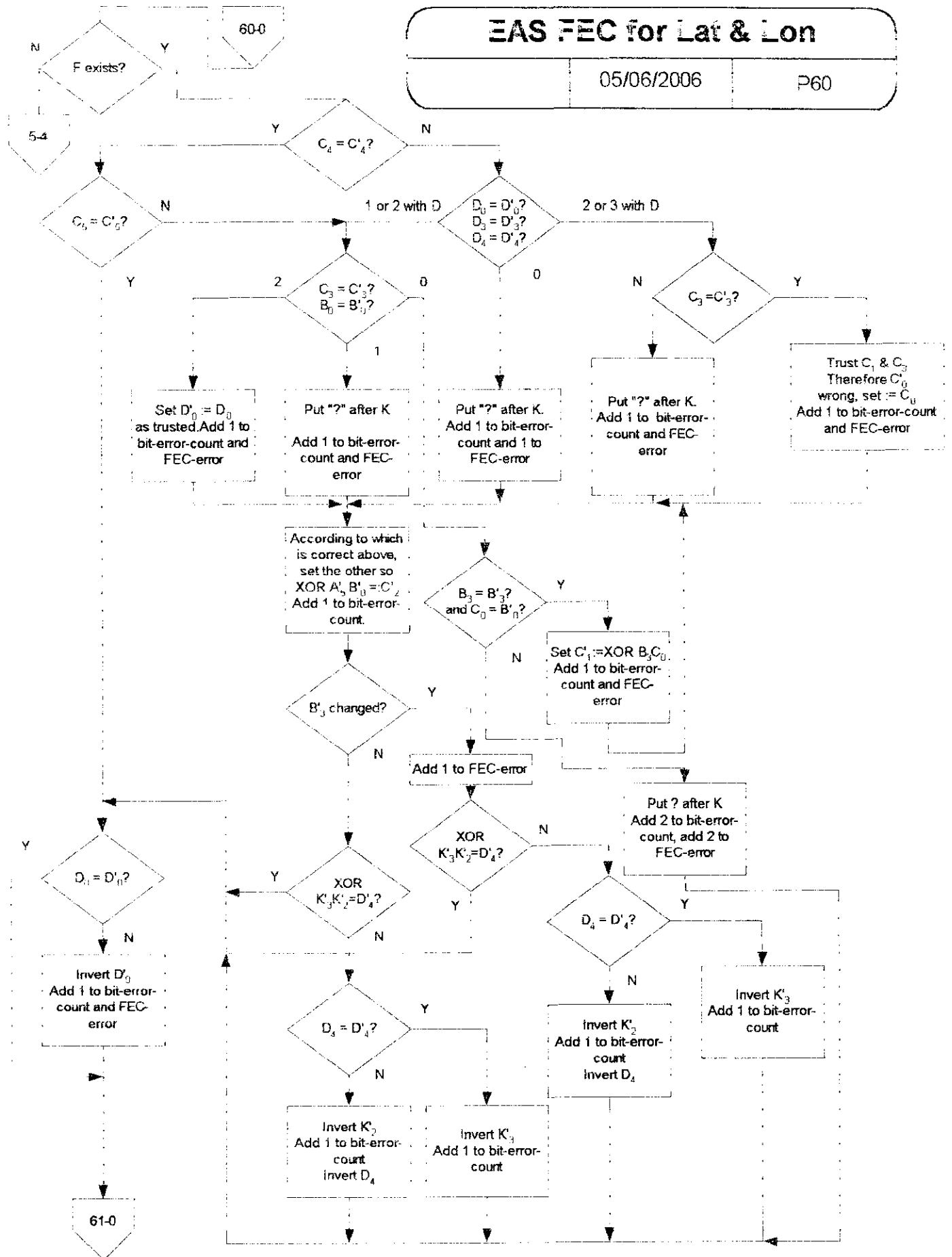
P51



# EAS FEC for Lat & Lon

05/06/2006

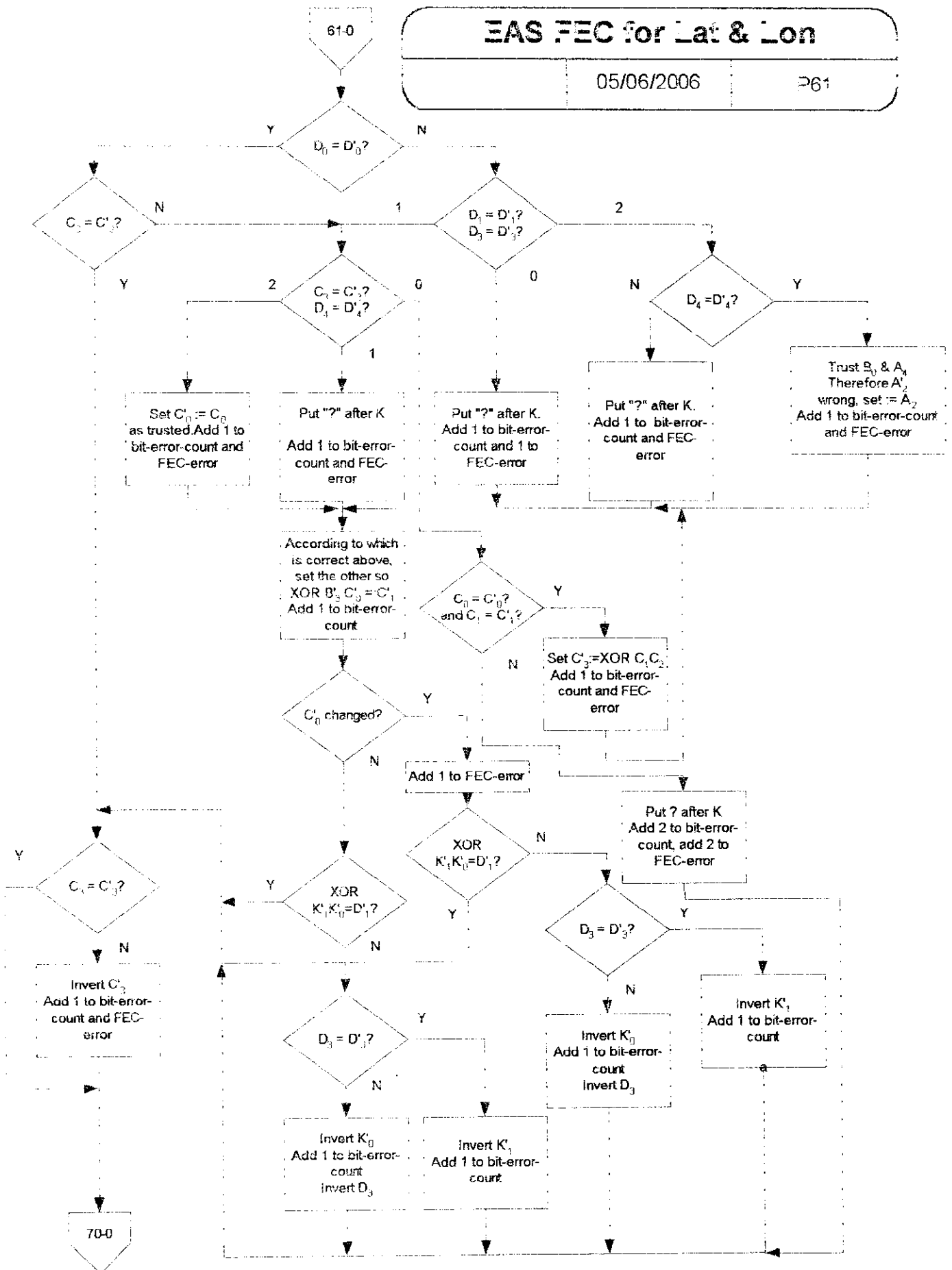
P60



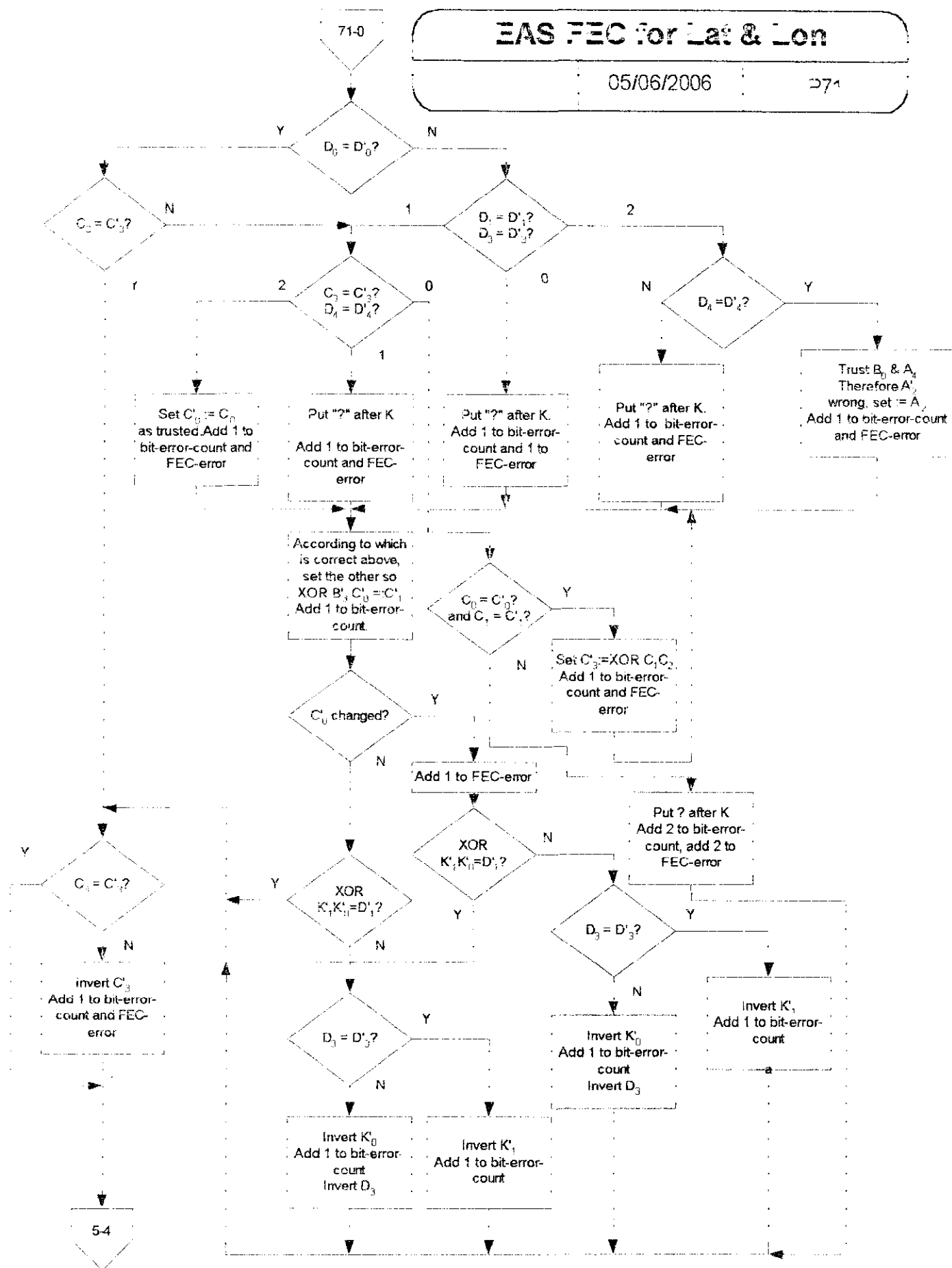
# EAS FEC for Lat & Lon

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## Appendix B: The Economics of Disaster Mitigation

While some may decry the financial approach to managing disaster mitigation, there are two reasons for this approach;

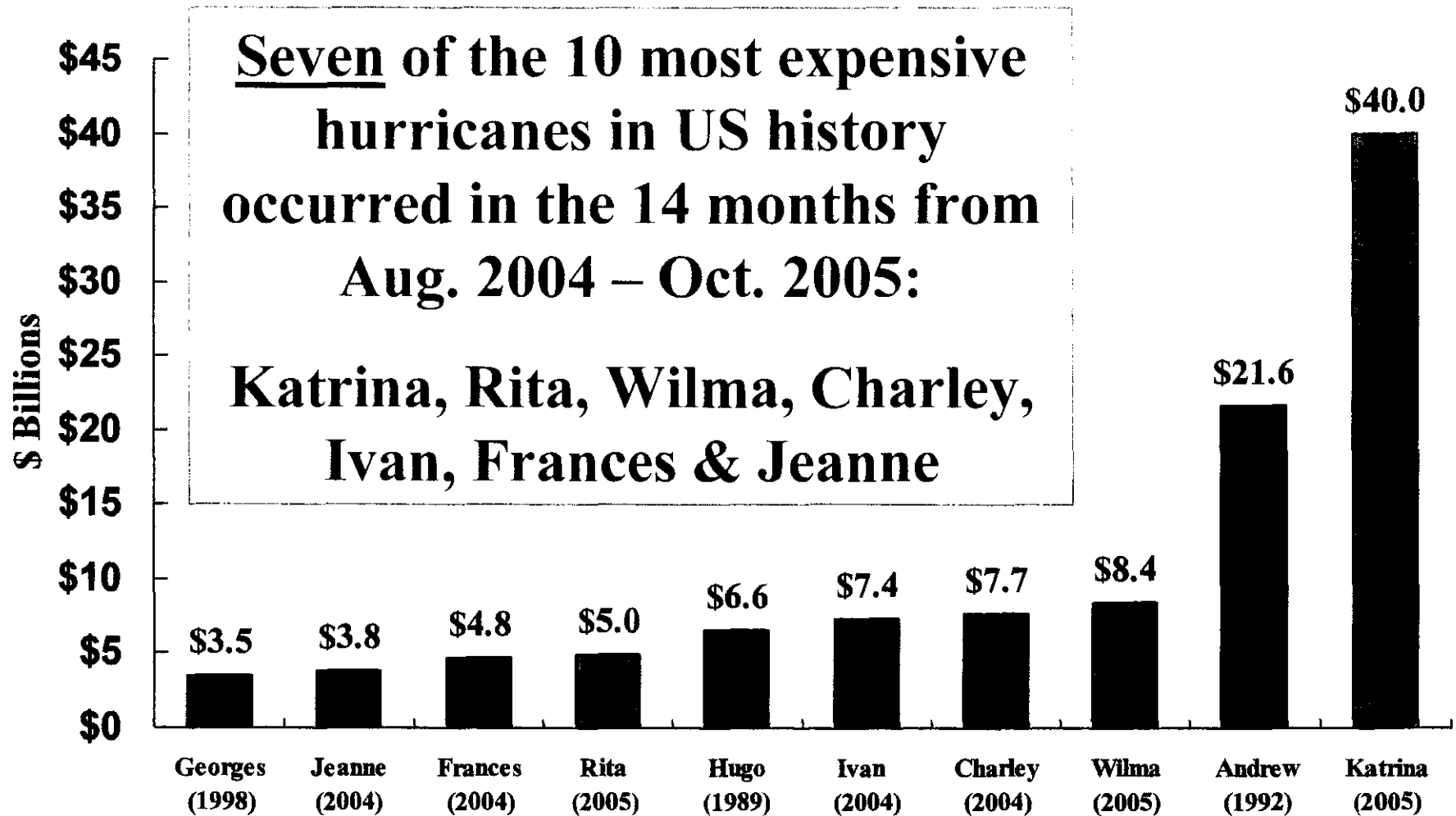
- A) Unless all the different types of variables are translated into equivalents in one variable (usually money), it is impossible to make comparisons between different approaches to decide which is the best.
- B) A great deal of information has to be processed in complex activities. Financial transactions are an efficient means of distributing that amongst those most effected. Failure to understand that was an important factor in the collapse of communism.

I recommend that the reader study the report on Katrina and other disasters prepared by Dr. Robert Hartwig for the Insurance Information Institute. It is available at [www.iii.org/media/presentations/katrina](http://www.iii.org/media/presentations/katrina). A few items are extracted from that for this chapter.

- 1) Disasters are getting more expensive. The complexity and value of populated areas is increasing, with better buildings, more expensive and numerous vehicles, and fragile but expensive "accessories", particularly electronics. While electronics can be made ruggedized, this is expensive and only the military usually can justify the extra expense. These all add to insurance claims.
- 2) The Katrina disaster was not the most extensive in U.S. history, the Galveston hurricane was. However the Caribbean gulf waters are warmer than decades ago. This leads to more frequent and more severe hurricanes, and also the drought in sub-Saharan Africa. While the damage from Katrina was \$40.0 Billion dollars, it was but one of the seven from the ten most expensive hurricanes in U.S. history which occurred in the 14 months from Aug. 2004 to Oct. 2005, as shown on the next page. This is from the presentation noted above.
- 3) Increased populations are developing dwellings in land which is more prone to floods and other disasters.
- 4) While the Asian tsunami of 2004 had a loss of life in the range of 225,000 to 300,000 persons, few of these people had life or property insurance, so it is not so significant based on insurance claims. So a better financial measure is the amount of aid provided. Worldwide this totaled \$5 Billion U.S. Dollars. While this is monetarily rather less than the Katrina damage, emergency managers are aware of the consequences of an equivalent tsunami impacting the west coast of the U.S. It appears that the waves maximum height was about 40 ft., but steel frame buildings were not visibly damaged above that height. There is no basic reason why such a U.S. west coast tsunami could not occur.
- 5) Mitigation measures may address property protection, lifesaving, or both. Sea walls, seismic resistant structures, flood control, etc. are primarily civil engineering measures, and are difficult or impracticable to provide after structures are built in place. Electronics measures can aid property protection when implemented as fire alarms, etc. However the Emergency Alert System is primarily a lifesaving measure. It may have value for property protection when earthquake warnings are reliable. However this is still in the scientific research stage and it is unclear when it will become adequately

- reliable. While electronics is a very rapidly developing technology, it is fortunate that it can be retro-fitted into existing structures (assuming adequate wireways are provided).
- 6) Given the very high costs of these disasters, and that it is increasingly being recognized that the New Orleans disaster was in considerable part man-made (National Geographic and others), the proposed funding by the U.S. Senate of \$1000 Million for interoperability for first responders, \$200 Million for EAS improvements, and \$50 Million for tsunami detection, are rather moderate amounts. The application of technology development and implementation takes time and if the time frame for the funding is five years, then a reasonable question would be whether a prudent implementation of the numerous improvements can be implemented that would be complete within five years. This is a more complex subject than solving a problem by throwing money at it. The sorts of solutions that would be effective are likely to also be ones which cut across numerous interest groups, and mitigation measures to address these groups can add time and money. I have already sought response from one disabled group, and without response, but that does not mean that objections will not arise from them or others later.
  - 7) While it is not simple to identify a relationship of return on investment versus investment level, and some would decry even such an attempt, this is appropriate for prudent management. Whether this is as low as 1% of the damage level or as high as 50% is worth consideration. However based on the money alone, this is not an adequate criteria. A better evaluation would certainly include the expected results of the various technologies, and the appropriate level of deployment of them. This requires planning and analysis, which takes time. Also the implementation should be well program managed to obtain the best result and financial management. This Emergency Alert System expansion proposal is a contribution to this discussion, and various other proposals are also relevant to some degree or other. Beyond that are aspects of disaster preparedness and interoperability of first responders, which is also a worldwide problem, not just a U.S. one, so hopefully any standards developed are made so with international applicability in mind, not just English speaking U.S. Then these standards can be approved by the appropriate international standards body, so resulting equipment and software can interoperate in the event of such emergencies. The Project Management Institute has been developing a disaster management methodology toward this end.
  - 8) As EAS is primarily about reducing injuries and deaths, then the insurance payouts for these are a directly relevant value, and are expected to be potentially large for many kinds of disasters.

# *Top 10 Most Costly Hurricanes in US History, (Insured Losses, \$2005)*



Sources: ISO/PCS; Insurance Information Institute.



# PUBLIC NOTICE

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**DA 01-2919**

Released: December 14, 2001

## FCC ANNOUNCES A NEW FILING LOCATION FOR PAPER DOCUMENTS AND A NEW FAX NUMBER FOR GENERAL CORRESPONDENCE

**NEW FILING LOCATION FOR PAPER DOCUMENTS.** Effective December 18, 2001, the Commission's contractor, Vistrionix, Inc., will begin receiving hand-delivered or messenger-delivered paper filings for the Commission's Secretary at a new location in downtown Washington, DC. The address is 236 Massachusetts Avenue, NE, Suite 110, Washington, DC 20002. The filing hours at this location will be 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.

This facility is the only location where hand-delivered or messenger-delivered paper filings for the Commission's Secretary will be accepted. Accordingly, the Commission will no longer accept these filings at 9300 East Hampton Drive, Capitol Heights, MD 20743. In addition, this is a reminder that, effective October 18, the Commission discontinued receiving hand-delivered or messenger-delivered filings for the Secretary at its headquarters location at 445 12th Street, SW, Washington, DC 20554.

Other messenger-delivered documents, including documents sent by overnight mail (other than United States Postal Service (USPS) Express Mail and Priority Mail), must be addressed to 9300 East Hampton Drive, Capitol Heights, MD 20743. This location will be open 8:00 a.m. to 5:30 p.m. The USPS first-class mail, Express Mail, and Priority Mail should continue to be addressed to the Commission's headquarters at 445 12th Street, SW, Washington, DC 20554. The USPS mail addressed to the Commission's headquarters actually goes to our Capitol Heights facility for screening prior to delivery at the Commission.

If you are sending this type of document or using this delivery method...	It should be addressed for delivery to...
Hand-delivered or messenger-delivered paper filings for the Commission's Secretary	236 Massachusetts Avenue, NE, Suite 110, Washington, DC 20002 (8:00 a.m. to 7:00 p.m.)
Other messenger-delivered documents, including documents sent by overnight mail (other than United States Postal Service Express Mail and Priority Mail)	9300 East Hampton Drive, Capitol Heights, MD 20743 (8:00 a.m. to 5:30 p.m.)
United States Postal Service first-class mail, Express Mail, and Priority Mail	445 12th Street, SW, Washington, DC 20554

**NEW FAX NUMBER FOR GENERAL CORRESPONDENCE.** In light of recent events in Washington, DC, resulting in unforeseeable and understandable disruption of regular mail delivery, the Commission wants to ensure that it continues to be accessible and responsive to members of the public. For this reason, the

Commission is providing a means for the public to fax general correspondence to the Commission, such as inquiries about the Commission's activities, status inquiries, fee-related questions, and any other correspondence that is not an official filing addressed to the Commission's Secretary.

The public may now fax correspondence to the Commission at 202-418-0188. If possible, please include the following information in the addressee block of the correspondence.

- The Commission's full name and address (445 12th Street, SW, Washington, DC 20554)
- The name of the Commission Bureau or Office to which the correspondence is directed
- The name and room number of the FCC staff person to whom the correspondence is directed

As noted above, this fax number for general correspondence must not be used for official filings addressed to the Commission's Secretary.

As the Commission continues to address the need for heightened security measures, the Commission encourages its customers to make full use of this additional means of communication. For additional information on contacting the Commission, go to <http://www.fcc.gov/contacts.html> Please address any questions about this Public Notice to Ginger Weasenforth, at [gweasenf@fcc.gov](mailto:gweasenf@fcc.gov) or at 202-418-0330.